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Under the Rug: The Pitfalls of an "Operating Balance" Approach for Reporting Federal Employee Pension Obligations

by
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- The federal Department of Finance has proposed a new presentation of the federal statement of operations that would highlight an "operating balance" in addition to the annual surplus or deficit and the resulting change in the government's accumulated deficit. This presentation would exclude changes in pension valuations from the costs of federal employees that appear in the new operating balance, and show those changes below it.
- This treatment is not appropriate, because those pension revaluations are the result of the federal government's systematically under-recording the costs of its pensions. The federal government records the costs of employees in its major funded pension plans using a high discount rate that understates today's value of the benefits they will receive tomorrow. Over time, it adjusts this discount rate downward, which reveals the costs of federal employees to be higher than initially reported – and adds to its annual deficit and the net federal debt.
- An "operating balance" that excludes these pension expenses will present a misleadingly positive picture. The government's annual operating expenses will look smaller than they should, and the operating balance line more positive than it should. The proposed presentation would sweep these expenses under the rug.
- Before it adopts the proposed operational balance concept, Ottawa should record the value of its obligations in its funded pension plans using discount rates based on yields on other federal government debt – as is already done for unfunded obligations. Only then could the operating balance improve the transparency and usefulness of the federal government's budgets and financial statements.

Focusing on Annual Operations or Changes in Financial Position: Which is Better?

Knowing where to focus when looking at the financial statements of an organization, whether a business, a not-for-profit, or a government, is always a challenge.

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For some purposes, the items in the annual statement of operations that highlight developments relative to management's annual budget are most useful. They typically help a reader understand, for example, whether revenue came in above or below projections, and how efficiently the organization managed its expenses.

For other purposes, the organization's statement of financial position is better. That statement highlights its net worth – its assets minus its liabilities – which is relevant to its capacity to continue operating, and changes in its net worth from one year to the next reveal whether its overall viability is improving or deteriorating.

Statements of operations and statements of financial position reconcile with each other: the positive or negative result from operations during the year is a key element in the overall change in net worth by year-end. But for governments, as for businesses and not-for-profit organizations, they help answer different types of questions. In particular, the statement of operations tends to highlight more of what is under management's control – which is why extraordinary items and one-time events often appear below the balance of revenue and expense that might be representative of the organization's experience as a "going concern."

The Department of Finance's Proposal

The tension between these two approaches to interpreting financial reports – (i) focusing on continuing operations and items that are relevant to assessing management's current actions, versus (ii) focusing on changes in the organization's viability – is useful context for considering a proposal from Finance Canada to add an "operating balance" concept to its financial reporting framework (Canada 2020).

The federal government has pension obligations to its employees that are material to its net worth – to its overall capacity to make transfers and deliver services. Because pension payments will occur in the future, representing them in the federal government's statement of financial position requires the use of a discount rate that converts future payments into a present value. Changes in the discount rates the federal government uses to value its pension obligations change their value. Changes in the value of pension obligations, net of any assets held against them, change the federal government's net worth. Since the annual results in the federal government's statement of operations must reconcile with changes in its net worth, changes in the discount rates used to value its pension plans must affect its bottom line – its annual surplus or deficit.

The operating balance proposed by Finance Canada would exclude the impact of discount rate movements on the valuation of accrued public sector pensions and other future benefit obligations owed to veterans and government employees. To emphasize, this proposal would not change the reported annual surplus or deficit, nor the resulting change in the government's accumulated deficit. Those are concepts in Public Sector Accounting Standards (PSAS) that the federal government's audited financial statements must adhere to.[1] It would, however, change the way the government's employee costs appear in its statement of operations.

1 It is critical that this new concept not displace, or distract attention from, the surplus or deficit measured in accordance with PSAS in the financial statements. An example of the confusion governments can cause with multiple bottom lines is provided by Quebec's budgets, which present annual changes to the province's net worth above adjustments made with respect to its Generations Funds. The adjusted bottom line guides operational decisions, and is often reported as the government's intended or actual result, and thus obscures the actual changes in the provincial government's net worth from year to year.

Currently, year-to-year changes in the discounted valuations of liabilities appear as part of annual compensation expenses. Under this proposal, compensation costs other than those related to changes in pension valuations would appear as expenses above the operating balance line. Costs related to valuation changes would appear as an adjustment below it.

This proposed presentation would make changes in valuations of pensions and other future benefits appear to be accidents outside the government's control – akin to a re-estimate of a contingent environmental liability, for example. In principle, that is defensible – or would be if the entire changes in valuations were actually outside the government's control. But they are not.

The federal government has been calculating, and continues to calculate, a major portion of its pension obligations using discount rates that are unrealistically high, and produce valuations of these obligations that are unrealistically low. Presenting the negative impact of periodic upward revaluations of its pension obligations below the operating balance line will understate the federal government's actual employment costs, and relegate the negative impact on its net worth to a category of expenses that appear to be outside its control – in effect, sweeping it under the rug.

Unless the federal government changes its pension valuation methods to use current market yields on securities that resemble its pension promises, Canadians will be better served by maintaining the existing presentation.

How Ottawa Values its Employees' Pensions

As we have documented at length elsewhere (most recently in Robson and Laurin 2018), pension benefits are an important part of the compensation of members of the federal public service, the Canadian Forces, the RCMP, members of Parliament and federal judges. Promises to pay pension annuities in the future are very much like federal government bonds: they are for fixed amounts and they are unconditional, backed by the full credit of the government. Although they are not identical to bonds – the total payout of an annuity obligation is unknown until the participant and any family members eligible for benefits dies – bonds are the asset they resemble most closely.

Valuation of Unfunded Plans

Since 2018, the government has recorded the cost of the pension plans for members of Parliament and federal judges, and the value of benefits earned before 2000 in the other three main plans, on the basis of actual bond yields. This approach makes sense – for the reasons just mentioned, the promise the government makes to participants in these plans closely resembles the promise it makes to bondholders.[2] These older pension promises are completely unfunded. Although Ottawa reports estimates of these pension obligations, which are part of the government's debt, it holds no assets to back them.

2 To be precise, it uses this approach for (i) all obligations related to service before April 2000, (ii) obligations under the three main plans since then that fall above *Income Tax Act* limits for DB pension plans, (iii) all obligations for federally appointed judges and members of Parliament, and iv) some pension obligations of consolidated Crown corporations and other entities. Before 2018, it reported values for these benefits using a discount rate that was a composite of past and projected future bond yields.

Valuation of Funded Plans

In 2000, the federal government and its employees in the three larger plans – the plans for the public service, the Canadian Forces and the RCMP – began making contributions that the Public Sector Pension Investment Board uses to buy assets. Accordingly, these plans are now typically referred to as funded plans: at least a portion of their pension promises are backed by assets.

For the funded plans, the federal government does not use actual bond yields to value its obligations. Instead, it uses a discount rate based on an assumed rate of return on assets – currently 5.8 percent, or 3.9 percentage points above the bond yields used to value other pension benefits.[3] One way of thinking about this difference is that it is a premium related to the risk that the future rate of return on the assets held by the plans may be below the returns that holders of federal bonds might earn. Since federal pensions are pure defined-benefit obligations backed by the federal government, taxpayers bear all of this risk.

To repeat, adopting current bond yields for discounting the pre-2000 obligations in the big three plans and for discounting all obligations in the other two plans (for MPs and judges) in 2018 was appropriate.[4] It is a fair-value measurement: it comes closer than any alternative to representing the value of the obligation to participants and its cost to taxpayers, because it approximates what an arm's-length party would be willing to pay to receive the benefits, or charge to forgo them. Since the benefits earned in the big three plans after 2000 are identical to those earned before 2000, It would make eminent sense to use the same approach in valuing them.

The understatement of accrued pension benefit obligations for post-2000 service of federal employees in the public service, RCMP and Canadian Forces is substantial. The government's financial statements reported "funded" pension benefit obligations of $149 billion as of March 2019, using a discount rate of 5.8 percent. This is far above any annual return available on comparable securities. Using the discount rate reflective of actual bond yields, 1.9 percent, these benefit obligations would have been $315 billion – more than double their reported value.[5]

For many years, the federal government resisted the move to fair-value discounting of future obligations partly on the basis of the volatility it would introduce to the bottom line. The proposed operating balance concept is meant to address this volatility concern: all the volatility would appear below the operating balance line.

The problem is that the operating balance would not only exclude revaluations related to pension obligations already shown at fair value. It would also exclude revaluations to the post-2000 obligations that have been recorded at an inappropriately high discount rate, and whose true, higher, cost will only emerge over time. So the new concept would make sense only if all future pension obligations were already valued at current bond yields.

How Changes in Discount Rates Affect Reported Expenses: A Representative Employee

The obligation to pay all federal employee pensions is unconditional. The actual funded status of the plans – the value of the assets they actually hold, if any – is immaterial. It makes no sense to discount the pension entitlement

3 In the last available Public Accounts of Canada for 2018/19.

4 See Robson (2018).

5 Authors' estimation based on the sensitivity analysis to changes in discount rates presented in the 2018/19 Public Accounts of Canada.

a long-serving employee accrued before 2000 at fair value using bond yields, and discount the amount accrued after 2000 at a higher, artificial, discount rate. The pension promises are the same. And so is the commitment from the taxpayer. Valuing part of this obligation at an artificially higher rate is not an accurate reflection of the government's net worth at any point in time, since it includes returns on risky investments that are not yet earned, and may never be earned (Hamilton 2014).

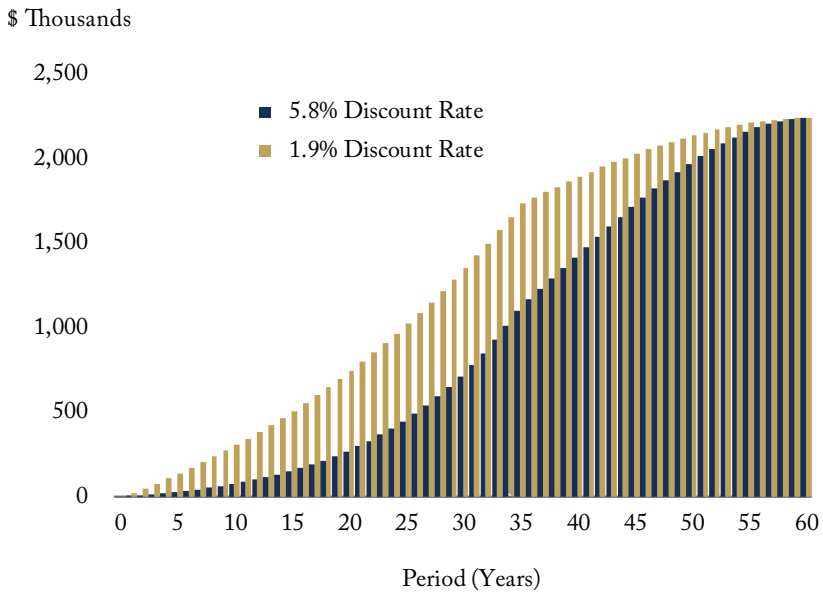
Over the entire life of all pension accruals and disbursements, the total charges recorded in the financial statements of the government will not change: a higher discount rate delays the burden of the expense so it falls on future taxpayers. A simple example illuminates this fundamental reality.

Take a federal employee who will retire with 35 years of service. For each year of service, he accrues an inflation-indexed lifetime retirement benefit equal to 2 percent of his final-average salary of $100,000: $2,000 per year. Suppose he lives 25 years in retirement and inflation is 2 percent. His annual pension will be $70,000 in his first year of retirement and $112,600 in his last, for an aggregate amount of $2.24 million. This employee's total annual benefit accrual averages $64,000 per year: 2 percent of $100,000 over 25 years, plus $14,000 in inflation adjustment. The federal government will report the resulting annual and cumulative accruals in its financial statements in three ways:

1. The government's portion of its cost – "benefit expense" – will appear as an annual program expense related to the present value of future pension benefits accrued in that year minus the share of contributions made by employees. The future pension obligation for the government will increase by the entire present value of future pension benefits accrued in that year. For our illustrative employee, in our simplified world, this is $64,000 annually.
2. The government will also report an annual expense related to the increase in the present value of pension obligations that have accrued in previous years. Every year that passes brings the time when each actual cash payment will occur closer. So the present value of the still unpaid portion of the benefit liability rises until it reaches its undiscounted value. This annual increase in the present value of accrued obligations is recorded as an "interest expense" in debt charges. In reality, the interest expense is the gradual recognition of the deferred compensation cost from its discounted value until it cumulatively reaches its cash value. There is no actual flow of funds from the employer to compensate the plan participants for this delay in recognizing the full value of their pension benefits. If this deferred recognition were shown as a loan from the employee to the employer, which is essentially what it is, the liability would logically be recorded at its arm's length, fair-market value – which is not how the federal government records the transaction.
3. The government reports, in its statement of financial position, the accumulation of all annual benefits accrued and interest expenses, minus benefits paid, as its "accrued benefit obligation." Since the accrued obligation has been recorded at a discount over the years, a change in the rate used to discount the obligation will change its present value. This change in value creates an "actuarial loss" if the discount rate is lowered, and an "actuarial gain" if the discount rate is increased. This gain or loss is added to the annual benefit expense over the expected average remaining service life of all employees in the Plan, which is on average about 13 years (Consultation Paper).

Differences in discount rates create differences in the timing of recorded expenses over the period between when an obligation accrues and when it is discharged. Use a constant discount rate of 1.9 percent, and about $1.7 million of the $2.24 million – more than 70 percent – of the pension benefits to our representative

Figure 1: Timing of Pension Charges to the Statement of Operations for Our Illustrative Employee under Two Discount Rate Scenarios



Note: Cumulative charges gross of employee contributions.

Source: Authors' calculations.

employee will be reflected in the pension liability after 35 years. Use a discount rate of 5.8 percent, and only $1.1 million of the $2.24 million – less than 50 percent – will be reflected (Figure 1).

Using a higher discount rate and recording a lower pension benefit cost upfront boosts the amount of money apparently available to the government of the day – which may be reflected in higher spending on programs, richer compensation to public employees, lower taxes or a better looking bottom line. It also reduces the amount of money available later on, with adverse consequences on all these fronts. The operating expense concept with a high discount rate could exacerbate this incentive problem for the government of the day, since the new expense charges created when it lowers the discount rate at a later time will not appear in the operating balance, but below that line.

How Changes in Discount Rates Affect Reported Expenses: The Aggregate Picture

Figure 1 illustrates a situation in which the discount rate does not change. In reality, discount rate assumptions do change over time. Changes in the discount rate assumption create actuarial gains and losses, which are recorded as part of the benefit expense. With total pension and other future benefit obligations valued at about $532 billion at the end of 2018/19 (Table 1), even small shifts in the discount rate can mean tens of billions of dollars on the bottom line.

Table 1: Accrued Benefit Obligations, 2018/19

		Accrued Obligation (*$ billions*)	Discount Rate Assumption
Pension Benefits	Funded	149.1	Expected rate of return on investment (5.8%)
	Unfunded	204.2	Fair value: Actual yields on federal bonds at fiscal year-end (1.9%)
Other Future Benefits		179.0	
Total		532.3	

Source: Public Accounts of Canada, 2018/19.

More than half[6] of the federal government's accrued obligation is now discounted at fair-market value – i.e., based on the actual yields on federal bonds at year-end. Year-to-year volatility in bond yields makes actuarial gains or losses dependent on market conditions, adding volatility to the government's bottom line.

Under the proposed operating balance presentation, actuarial gains or losses would not appear in the operating balance, but would be added below it. If bond yields move up and down through time in an unpredictable fashion, corresponding changes in the discount rate on federal pensions would create offsetting gains and losses. Below-the-line recognition of such random fluctuations would make the proposed operational balance more stable than the bottom line, providing a clearer picture of results under the government's control.

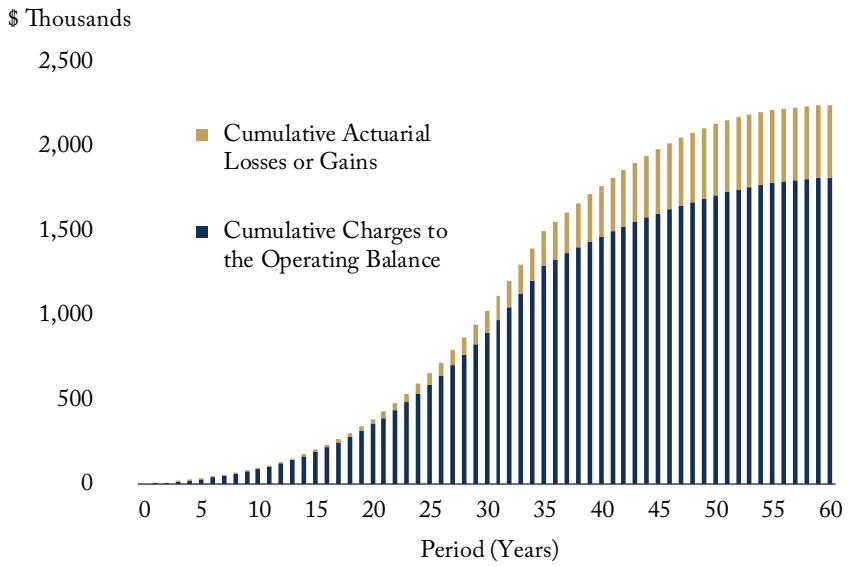
But if discount rates do not vary randomly, the operating balance is not an appropriate aid to fiscal planning. And the outlook for discount rates is clearly not one of random variation, but a persistent downward adjustment from current inflated values to lower ones closer to bond yields. Take our illustrative employee example, and assume that the discount rate declines by 0.1 percent annually, from 5.8 percent to 1.9 percent. This creates actuarial losses, which are smoothed over time. Cumulatively, over the lifetime of the pension obligation, about $400,000 of the overall $2.24 million cost – 19 percent – will be recorded in the annual benefit expense through actuarial losses (Figure 2).

Under the proposed operating balance concept, these actuarial losses recognized annually would be excluded from annual operating expenses. If government spending intentions and/or the government's fiscal performance were guided by the proposed operational balance, declines in the discount rate would lead the government to run a lax fiscal policy above the operating balance line, while larger total deficits accumulated below it. This sweeping of pension expenses under the rug may bias fiscal planning inappropriately in the direction of deficits.

So the proposed concept can usefully handle unforeseeable volatility in the discount rate. It is inappropriate, however, when movements in the discount rate are foreseeable, or controlled by the government. Therefore,

6 Replacing the $149.1 billion of liabilities valued at 5.8 percent with our estimate of fair value provided in the previous section ($315 billion) reveals that about 55 percent of the obligation is funded at fair-market value.

Figure 2: Timing of Pension Charges to the Statement of Operations for Our Illustrative Employee under a Gradually Declining Discount Rate Scenario



Note: Cumulative charges gross of employee contributions.

Source: Authors' calculations.

funded pension obligations should be changed to fair value discounting before the new reporting concept is put into place.

Bringing All Pension Obligations under Fair Value Discounting

What if the government presented its funded pension obligation at fair value at the same time it adopted the proposed reporting concept? That is, at recent bond yields – 1.9 percent, rather than the 5.8 percent discount rate used for the 2018/19 fiscal year? The value of pension benefits earned in that year would likely have been more than three times – some $15 billion – higher.[7] After allowing for the offset of a $2 billion decrease in pension-related interest expense, the reported deficit, and the increase in the accumulated deficit, would have been about $13 billion worse.

Even that revelation would leave a large actuarial loss to report in the future. Best would be to apply the change of discount rate retroactively, and recognize the total fair-value pension obligation at once. Then the new operating balance concept could help users of federal financial statements, and fiscal planners, see through the volatility to the bottom line created by further changes to the discount rate reflecting changes in actual bond yields.

7 Net of employee contributions. Our gross estimate uses the sensibility analysis of the current service cost for the Pension Plan for the Public Service of Canada found in its latest actuarial report (Canada 2018).

Additional Disclosure

Any new proposed separate line for actuarial gains or losses should also be accompanied by greater disclosure of the undiscounted size of the obligation and the future impact of interest rate movements. More detail on the process used to smooth actuarial gains and losses through time would help analysts assess the impact of movements in interest rates on the operating balance and on the federal government's bottom line.

Conclusion

The proposed operating balance measurement concept in the federal government's financial reporting framework is meant to address volatility created by discount rate variations reflecting changes in bond yields. Whatever its merits in highlighting elements of the federal budget over which the government has greater control, no such move should occur until the federal government has valued all its future employee benefit obligations using discount rates based on yields on other federal government debt. Only then can the operating balance improve the transparency and usefulness of the federal government's budgets and financial statements.

References

Canada. 2018. "Actuarial Report on the Pension Plan for the Public Service of Canada as at 31 March 2017." Office of the Chief Actuary, Office of the Superintendent of Financial Institutions Canada. September.

Canada. 2020. *Consultation paper: Proposed Changes to Reporting of Gains and Losses in the Government's Financial Results*. Department of Finance. March.

Hamilton, Malcolm. 2014. *Evaluating Public Sector Pensions: How Much Do They Really Cost?* Commentary 403. Toronto: C.D. Howe Institute. March.

Robson, William B.P., and Alexandre Laurin. 2018. *Retiring Employees, Unretired Debt: The Surprising Hidden Cost of Federal Employee Pensions*. Commentary 514. Toronto: C.D. Howe Institute. May.

Robson, William B.P. 2018. "Ottawa Comes Part-Way Clean on its Pensions." Intelligence Memo. Toronto: C.D. Howe Institute. October 19.

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